

PATENT CLAIMS

1. An extraction tool (20) for extracting spiral threaded inserts (19, 33), in particular through inspection ports (12, 15, 34), which extraction tool (20) comprises an elongated basic body (23,...,26), on the one end of which an extracting tip (28) narrowing toward the front and intended for being inserted with a cutting action into the threaded insert (19, 33) to be extracted is provided and on the other end of which means (23) for turning the extraction tool (20) about the tool longitudinal axis are provided, characterized in that at least a section of the extracting tip (28) has the shape of a steep-angle truncated pyramid (28.1).

2. The extraction tool as claimed in claim 1, characterized in that the extracting tip (28) has a square cross section.

3. The extraction tool as claimed in claim 2, characterized in that the angle of inclination of the faces of the truncated pyramid (28.1) relative to the perpendicular is only a few degrees, preferably about 1.5°.

4. The extraction tool as claimed in one of claims 1 to 3, characterized in that the extracting tip (28) is releasably held in the extraction tool (20).

5. The extraction tool as claimed in claim 4, characterized in that the extracting tip (28) is screwed to the basic body (23,...,26) of the extraction tool (20).

6. The extraction tool as claimed in claim 5, characterized in that a fastening screw (22) is provided for the screwing of the extracting tip (28), this fastening screw (22) being inserted through the

basic body (23,...,26) into a thread (29) arranged on the extracting tip (28) and being supported on that end of the basic body (23,...,26) which is opposite the extracting tip (28).

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7. The extraction tool as claimed in one of claims 4 to 6, characterized in that the extracting tip (28) is subdivided into a section (28.1) in the shape of a truncated pyramid and an adjoining square section (28.2), in that the extracting tip (28), with the square section (28.2), sits in an insert (27) in a rotationally fixed manner, and in that the insert (27), preferably via a hexagonal section (31), is inserted into the basic body (23,...,26) in a rotationally fixed manner.

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8. The extraction tool as claimed in one of claims 1 to 7, characterized in that the extracting tip (28) is made of hardened steel.

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9. The extraction tool as claimed in one of claims 1 to 8, characterized in that the means for turning the extraction tool (20) comprise a hexagonal tubular piece (23).

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10. The extraction tool as claimed in one of claims 1 to 9, characterized in that an impact adapter (21) can be put onto that end of the basic body (23,...,26) which is opposite the extracting tip (28).

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11. The extraction tool as claimed in one of claims 1 to 10, characterized in that the basic body (23,...,26) comprises a plurality of parts, in particular a receptacle (26) with hexagon socket, an intermediate piece (25), a tube (24) and a hexagonal tubular piece (23), and in that the parts (23,...,26) are integrally connected to one another, in particular welded.

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12. The use of the extraction tool (20) as claimed in one of claims 1 to 11 for extracting a threaded insert (33), in particular through an inspection port (12) in the casing (11) of a gas turbine (10), characterized in
5 that an extracting tip (28) matching the inside diameter of the threaded insert (33) is selected and inserted into the extraction tool (20), in that the extraction tool (20), with the extracting tip (28), is inserted through the inspection port (12) into the
10 threaded insert (33) to be extracted, in that the extracting tip (28), by means of blows on the rear end of the extraction tool (20), is driven into the threaded insert (33) in such a way that the edges of the extracting tip (28) press into the threaded insert
15 (33) and connect the extracting tip (28) to the threaded insert (33) in a rotationally fixed manner, and in that the threaded insert (33) is unscrewed by turning the extraction tool (20) about the longitudinal axis and then, sitting on the extracting tip (28), is
20 pulled out through the inspection port (12).

13. The use as claimed in claim 12, characterized in that the extracting tip (28), by means of blows on the rear end of the extraction tool (20), is driven into
25 the threaded insert (33) in such a way that the edges of the extracting tip (28) press into the threaded insert (33) virtually over the entire depth to which the extracting tip (28) plunges into the threaded insert (33).